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THE ULU, OR WOMAN'S KNIFE, OF THE ESKIMO.

BY

OTIS T. MASON,

Curator, Department of Ethnology.

From the Report of the National Museum for 1890, pages 411–416
(with Plates LII-LXXII).

WASHINGTON:
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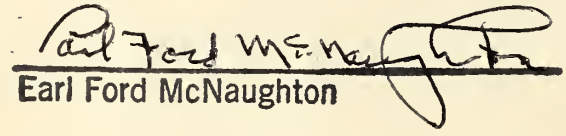

Earl Ford McNaughton

THE ULU, OR WOMAN'S KNIFE, OF THE ESKIMO.

By Otis T. Mason.

The apparatus described in this paper finds its modern representative in the saddler's knife, the shoemaker's knife, the tailor's shears, the butcher's knife, the fishmonger's knife, and the kitchen knife. A curious survival of form with change of function is the common kitchen "chopping knife," which woman may be said to have held in her possession since the birth of invention. This little instrument that has ever attended the march of civilization is called "ulu," or "ooloo," by the Eskimo, or more commonly the "woman's knife."

It is well to recall in this connection that in savagery the peaceful arts, such as housemaking, furnishing, tailoring, butchering, gleaning, milling, cooking, spinning, netting, weaving, and the like, belong to women. Many of the stone implements and pottery vessels recovered from the mounds and graves are found with skeletons of females. In the study of culture, therefore, the work of women can not be overlooked.

The motive for bringing together this series of objects, however, is to show how, by means of a very simple form or invention, some of the most difficult problems of anthropology may be discussed. They will be taken up in the following order:

(1) Among the same race or stock, and in the same period, there are varieties of form, structure, and decoration, peculiar to separate culture areas.

(2) Upon the simplest as upon the most complicated appliance of human activity the earth and its productions leave unmistakable impressions.

(3) The coarseness or refinement of a tribe or location is revealed in the tools of the commonest occupation.

(4) The arts and apparatus of savagery are continued into civilization, and with change of name or function retain some of their original form.

There are a great many examples of the Ulu in the National Museum, and there are thousands of pieces of slate, shale, quartzite, and other stone which correspond exactly with the blades of the Eskimo woman's knife. These have been gathered from village sites, shell heaps, the surface of the soil, from graves, mounds, and Indian camps in countless numbers. This need surprise no one who reflects that every woman

and every girl among the American aborigines had one or more of these indispensable implements. To conceive of a savage without a knife is to conceive of man before he held the simplest invention in his hand with which to help himself.

The simplest form of knife is a flake or spall of flinty or glassy material knocked from a stone or a core so as to preserve a cutting edge. A few knives from Point Barrow are of this very primitive character, but these really are not within the class here described; the ulu as it nowadays exists is a complex affair, consisting of a blade and a handle or grip with or without some form of lashing. The blade is either a thin piece of slate ground to an edge, a bit of cherty or flinty rock chipped to an edge, a scrap of steel or iron from wrecks of whaling vessels, or good blades made and sold to the Eskimo by traders who visit their country (Pl. LII to LXXII).

The handle of this common implement varies greatly in material, form, and finish. In form alone the specimens from each typical area are unique. So much so that one who has handled a great many of them finds no difficulty in relegating a stray example to its proper companionships.

In the matter of attaching the blade to the handle or grip the Eskimo's mother wit has not deserted her. Many of the blades are tightly fitted into a socket or groove of the handle. Boas, who lived among the Cumberland Gulf Eskimo, tells us that glue is made of a mixture of seal's blood, a kind of clay, and dog's hair (Rep. Bur. Ethnol., VI, 526).

Among the western Eskimo it is quite common to cut a hole through the blade and the handle and to fasten the two together by a sewing or lashing of rawhide, whalebone, pine root, or sinew cord. There is one specimen with a grip of a still more primitive character. The solid handle is replaced by a basketwork of spruce root woven around the thick upper portion of the blade (Pl. LXI, fig. 1.) Archæologists are especially asked to note this device, explaining how a grip may be provided by ingenious savages even when a mortise is impracticable.

In this chapter, as in others devoted to the Eskimo, it is found convenient to divide the American Hyperborean region into the following culture areas: Labrador and Ungava (Pl. LV, Fig. 3); Greenland (Pl. LII, LIII, LIV, Fig. 1); Baffin Land (Pl. LIV, Figs. 2 and 3, Pl. LV, Figs. 1 and 2); Mackenzie River District (Pl. LVI and Pl. LVII, Fig. 1); Point Barrow (Pl. LVII, Figs. 2 and 3, Pl. LVIII, Pl. LIX); Kotzebue Sound (Pl. LX and LXI, Figs. 1 and 2); Sledge Island, St. Lawrence Island, and Asiatic side (Pl. LXI, Fig. 3, Pl. LXII, Figs. 1 and 2; Norton Sound and Yukon District (Pl. LXII, Fig. 3, Pl. LXIII, LXIV, LXV, LXVI); Nunivak Island and mainland, and Kuskokvim mouth (Pl. LXVII Figs. 2 and 3); Bristol Bay, Peninsula of Alaska, Kadiak and vicinity (Pl. LXVIII to LXXI, Figs. 1 and 2); Indians of Southeast Alaska (Pl. LXXI, Fig. 3, Pl. LXXII.) Some of these are further divided by types and forms of objects.

II.—REGIONAL INFLUENCES.

It is too well known to be argued that there are certain great culture areas on the earth, where man himself and all that he creates are fitted to natural conditions distinct enough to give form and color to everything. The Eskimo land is one of these culture areas. It may have escaped observation, however, that in these limits there are often subdivisions or sub-areas which impress a still more definite and distinct mark on man and his civilization.

The woman's knife is found throughout the Eskimo region, from Labrador to Kadiak. Some portions of this hyperborean strip have long been under the influence of the missionary, the trader, and the fisherman, and their part in determining the structure of the ulu will soon be made to appear. But the alternation of slate and chert in the blade is governed by natural conditions, the abundance of the material in the vicinity. A possibility of traffic must always be allowed for; but in a large number of implements of this kind, if they were classed by the material of the blade, the localities would not be very badly mixed. But, failing in this, the handle or grip comes to the help of the student. If this be made of antler we are somewhere within the limits of the moose or the reindeer. In the Hudson Bay region some of the handles are of musk-ox horn, a thing possible in great numbers only where this creature abounds. And, *vice versa*, the presence of the musk ox may be based upon the occurrence of implements made of the horn. Walrus-ivory handles not only indicate the presence of the walrus at any given point, but in a great collection like that in the National Museum, the abundance and accessibility of the walrus are indicated by the diffusion of the specimens. A great many handles of wood in the south of Alaska speak with sufficient clearness of the fact that this material is more abundant in some localities than in others.

III.—DEGREES OF REFINEMENT.

The Eskimo furnish the best of all the remaining uncivilized areas for the examination of the grade and kind of civilization possessed by any people as indicated by their arts. Some of the ulus in the National Museum are as coarse as savagery could make them; others are very beautiful. Indeed the same locality furnishes both and intervening kinds, due, without doubt, to individual ability or personality. But some areas furnish only coarse work, while others supply the most beautiful. The problem is a complex one, and must be studied with caution. White influence has crept in to embarrass the question, giving the following classes of results:

(1) Knives made out and out by white men and sold to the Eskimo, having blades of steel riveted into handles of antler cut by machinery.

(2) Specimens made apparently partly by the ship's blacksmith and partly by the native, a kind of joint production.

(3) Specimens made from iron, wood, and other materials gathered from wrecks. The art in this case is more decidedly native than it is in Nos. 1 and 2.

(4) Specimens made of native material, but the carving on the handles was done with iron or steel blades set in native handles. This form of ulus marks a very peculiar phase of contact between savagery and civilization, worthy of careful study by all technologists and archæologists. To be more explicit, when the voyageurs and explorers entered the fur-producing sections of our continent in the sixteenth century, they made no attempt to change a single industry or social structure of the aborigines. They only sought to profit by their native arts, and in order to do so simply removed the stone arrow point to substitute one of hoop-iron, or replaced the bow by a better implement, the rifle. If at the same time the traders brought steel-bladed pocket knives, steel files, and a few other primitive tools, and if at this period the natives were still building mounds and carving stone, then we could easily account for the more refined pipes and other artefacts which seem to point to a knowledge of steel, without recourse to the suspicion of fraudulent manufacture. At any rate, the art of ivory carving bloomed out among the Eskimo on the acquisition of steel carving tools. The Russian fur traders and the Hudson Bay factors have been always careful to preserve the native in his simplicity and to break up his manner of living as little as possible. When this golden mean was transcended the native art began to decay. The most intelligent and skillful were won over to the higher arts of the cultured races and the older arts were left to languish in the suburbs even of barbarism.

(5) Specimens entirely native in material and workmanship. These are the rare specimens, frequently old, mostly from out of the way places and not of the highest finish. The limitations are those incident to the poorer tools of savagery. They have blades of polished slate or chipped stone; handles of wood, bone, ivory or antler; glue of native manufacture or lashing of spruce root, rawhide, or sinew.

IV.—SURVIVALS.

The ulu is found in civilization under two well-known forms, the saddler's knife and the kitchen knife.

The saddler's knife may be seen in the hands of a workman on the Egyptian monuments (Pl. LII, Fig. 1), showing that very early in the history of industry, just as soon as a sufficient number of men could be relieved from the function of weapon bearing, they little by little assumed some of the more masculine of woman's occupations. It is just as if the woman of an advancing people had taught the man to work in leather and had then passed over to him the apparatus of the craft. It is worthy of notice that the shoemaker has repudiated the ulu form and the cutting from him and has adopted the common knife. The saddler

perpetuates for cutting leather an implement designed to be used with skins from which the hair has not been removed.

The kitchen chopper represents a very different conception, no less than the continuation of a structure with great modification of function. It is still the woman's knife deprived of nearly all its ancient and primitive offices, consigned to a single one which it scarcely had at the beginning. From this we are led to the reflection that it is easier to change the culture of women than the culture of men. Civilization lifts up savagery almost exclusively through women. Men go down in the struggle, can not learn occupations diametrically opposite to those they have been pursuing, and occupations which through generations they have considered degrading.

LIST OF SPECIMENS ON WHICH THIS INVESTIGATION WAS BASED.

From the foundation of the National Museum many friends have brought specimens from the Eskimo region. The obligations of every student are due and can not be too emphatically expressed to Fenckner, Bessels, Turner, Kumlien, Müutzer, Boas, Hall, McFarlane, Ross, Kennicott, Ray. Murdoch, Herendeen, Stoney, Baker, Dall, Elliott, Nelson, Applegate, Johnson, Fisher, McLean, Swan, and others not now recalled. The Alaska Commercial Company has lost no opportunity to help in the matter and has gathered on the west coast one of the best series of Eskimo objects in the world. The accompanying list does not include every specimen in the museum; it embraces only those on which this investigation was based.

Mus. Cat. No.	Locality.	By whom collected.	Mus. Cat. No.	Locality.	By whom collected.
1630	Anderson River..	McFarlane.	38255	L. Yukon River...	Nelson.
2272	....do	Do.	38366	Newlukh	Do.
5813 (440)	McKenzie, Anderson River.	Do.	43132	St. Michaels	Do.
			43866	Unalakleet	Do.
7419	Fort Anderson....	Do.	43959	Nubviakchuliak ..	Do.
10215 (21)	Repulse Bay.....	Hall.	44180	Cape Darby	Do.
20844	Kootznoo Indians	Swan.	44598	Capo Nome.....	Do.
24353	Norton Island.....	Turner.	45489	St. Michaels.....	Do.
24365	...do	Do.	46256	Plover Bay	Dall.
24365	St. Michaels	L. M. Turner.	48257	Nunivak.....	Nelson.
24376	....do	Turner.	48823	Rasb. Yukon.....	Do.
	Cumberland Gulf.		(7168)		
29973	...do	W. A. Mintzer.	48841	....do	Do.
33628	St. Michaels	Nelson.	(7168)		
33744	....do	Do.	48831	....do	Do.
33745	St. Michaels	Do.	55916	Bristol Bay.....	McKay.
33766	Norton Sound.....	Do.	55916	....do	Do.
36316	Kongigre	Do.	55918	....do	Do.
37327	Agiukchuguluk ..	Do.	55918	....do	Do.
37741	Kongig	Do.	55918	....do	Do.
37960	Ifagamut	Do.	56660	Point Barrow	Ray.
38129	Nulokh	Do.	63765	Hotham Inlet....	Nelson.

Mus. Cat. No.	Locality.	By whom collected.	Mus. Cat. No.	Locality.	By whom collected.
63766	Hotham Inlet	Nelson.	89685	Point Barrow	Ray.
63916	Greenland	Finuker.	89687	do	Do.
63919	do	Do.	89688	do	Do.
72540	Kadiak	Fisher.	89689	do	Do.
72541	Kadiak (?) Orlova	Do.	89690	do	Do.
74362	Sitka	McLean.	90259	Ungava	Turner.
75496	Kotzebue Island	Stoney.	90409	Bristol Bay	Fisher.
75497	do	Do.	90410	Kodiak	Do.
75497	do	Do.	90412	do	Do.
76676	Cape Lisburne	H. D. Woolfe.	127008	St. Lawrence Island.	Nelson.
88678	Point Barrow		127043	Smith Island	Dr. E. Bessels.
88772	British Columbia	Swan.	127382	Togiak River	Applegate.
89591	Point Barrow	Ray.	127389	Igushek River	Do.
89645–46	do	Do.	127725	Fort Wrangel	Fisher.
89675	do	Do.	127735	Ugashk	Do.
89677	do	Do.	130617	Kuskokvim River	C. Adler.
89684	Point Barrow	Do.			

EXPLANATION OF PLATE LII.

EGYPTIAN LEATHER-WORKER, AND EAST GREENLAND ULUS.

Fig. 1. An Egyptian leather-worker using the "saddler's knife" or saddler's ulu. From Wilkinson.

Figs. 2, 3, and 4. East Greenland form of ulu, from Holm's Ethnographic Sketch, Pl. XIX, to be compared with Mackenzie River type, Pl. V of this paper. Both show contact with European whalers and fur traders.

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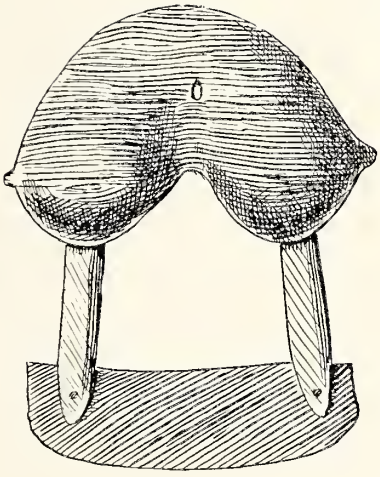

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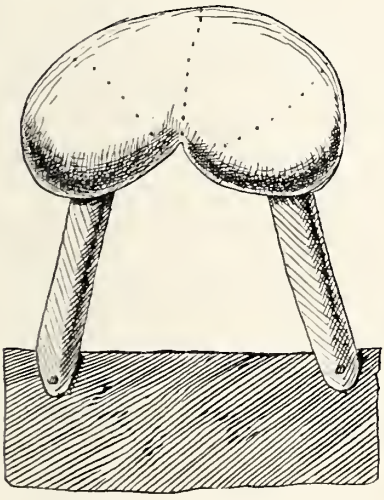

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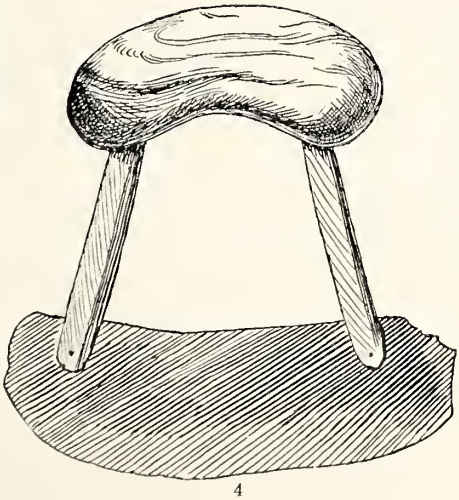

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EGYPTIAN LEATHER-WORKER. AND EAST GREENLAND ULUS.

EXPLANATION OF PLATE LIII.

GREENLAND ULUS, OR WOMAN'S KNIVES.

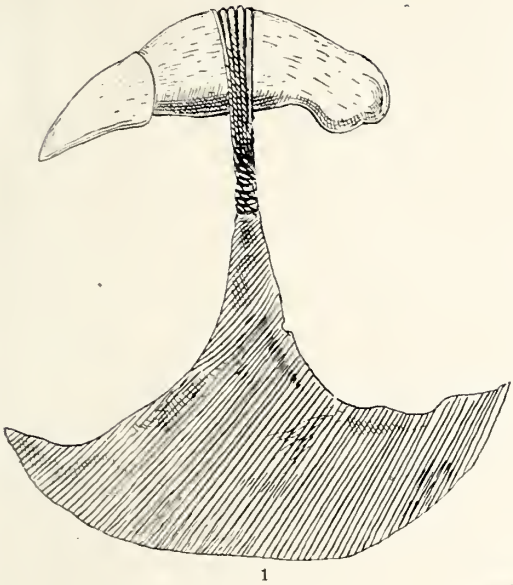
Fig. 1. Ulu from East Greenland, to be compared with Pl. III and IV of this work. From Holm's Ethnographic Sketch, Pl. XIX.

Fig. 2. WOMAN'S KNIFE (ULU). Blade of iron in form of the bottom of a bell, inserted in a groove of the walrus ivory handle. The latter is in two pieces sewed together with sinew thread, its upper portion projecting at the ends. Width of blade 3 inches.

Cat. No. 127043, U. S. N. M. Eskimo of Smith Sound, Greenland. Gift of Governor Fencker.

Fig. 3. WOMAN'S KNIFE (ULU). Blade of iron in form of a vertical segment of a bell, inserted in a groove of the decayed ivory handle. Handle, $1\frac{5}{8}$ inches; blade, $1\frac{3}{4}$ inches.

Cat. No. 63919, U. S. N. M. Eskimo of Upernavik, Greenland, 1882. Gift of Governor Fencker.



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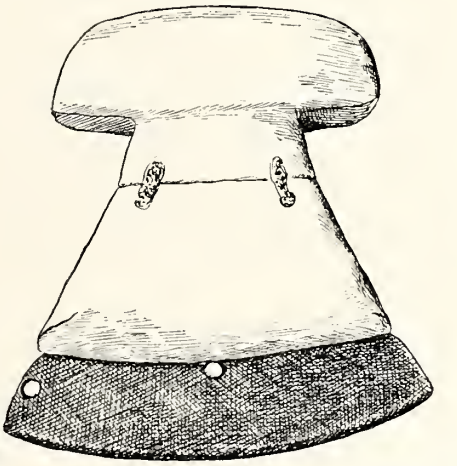

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GREENLAND ULUS, OR WOMAN'S KNIVES.

EXPLANATION OF PLATE LIV.

ULUS, OR WOMAN'S KNIVES, OF CUMBERLAND GULF.

Fig. 1. WOMAN'S KNIFE (ULU). Blade of iron in form of a segment of a circle, with a slender stem inserted in a spindle-form handle of ivory. Blade, 5 inches; stem, $2\frac{3}{4}$ inches.

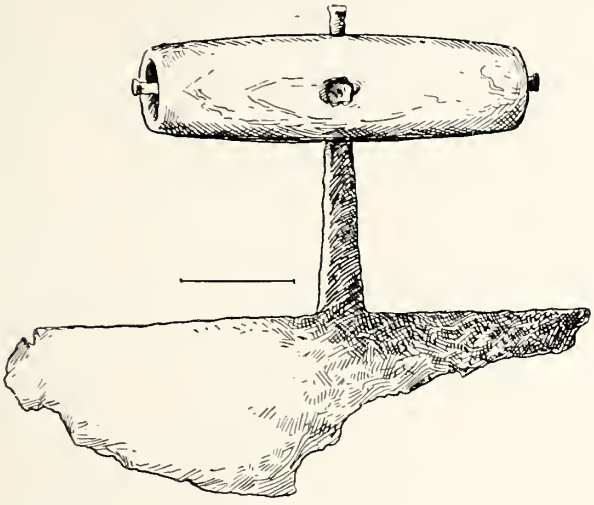
Cat. No. 63916. U. S. N. M. Upernavik, Greenland, 1882. Gift of Governor Fencker.

Fig. 2. WOMAN,S KNIFE (ULU). Blade slightly crescent-shaped, riveted to the iron stem one side by means of three iron rivets. The grip is of oak, probably from a whale ship. The smithing is very rude. Length of blade, $5\frac{1}{8}$ inches.

Cat. No. 29973, U. S. N. M. Eskimo of Cumberland Gulf, 1876. Collected by Lieut. W. T. Mintzer.

Fig. 3. WOMAN'S KNIFE (ULU). Blade of iron, slender, the two ends resembling bowie-knife points. This is riveted to a plate of iron serving as a stem driven through a handle of oak. Rude smithing characteristic of this area. Length of blade, $4\frac{1}{4}$ inches.

Cat. No. 29973 (*a*), U. S. N. M. Eskimo of Cumberland Gulf. Collected by Lieut. W. T. Mintzer.



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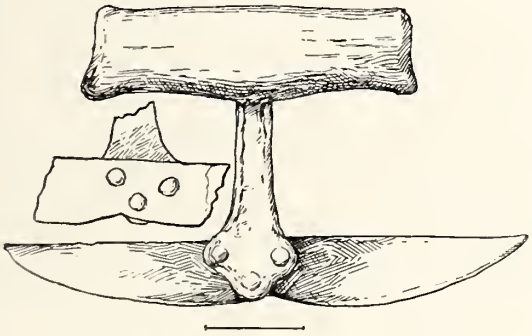

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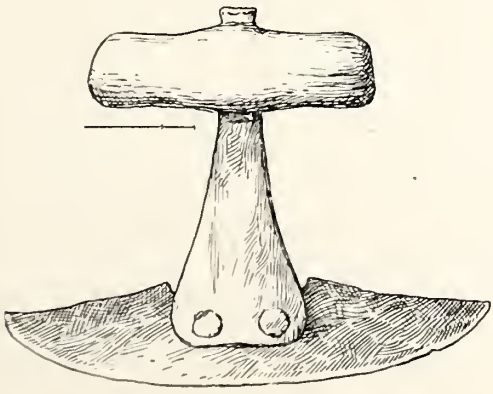

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ULUS, OR WOMAN'S KNIVES, OF CUMBERLAND GULF.

EXPLANATION OF PLATE LV.

ULUS, OR WOMAN'S KNIVES, FROM NORTHEAST CANADA.

Fig. 1. WOMAN'S KNIFE (ULU). Blade bell-shaped, riveted into a deep groove of the ivory base of the handle. The handle consists of three parts, the grip of musk-ox horn, the stem of antler inserted into the grip and sewed with sinew thread to the blade piece. Length of knife, 4½ inches.

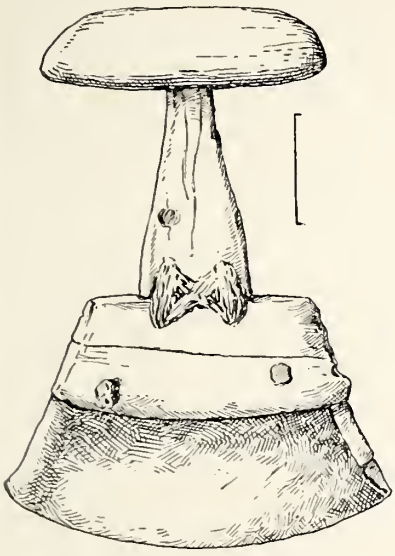
Cat. No. 10411, U. S. N. M. Pelly Bay, 1871. Collected by Capt. C. F. Hall.

Fig. 2. WOMAN'S KNIFE (ULU). Blade of iron, fan-shaped, riveted to the iron stem on one side with four copper and one iron rivets. Upper end of stem driven into a grip of musk-ox horn. A very graceful piece, the sides of the blade were roughly cut with a cold chisel or file, perhaps by a whaling ship's carpenter. Length, 4 inches.

Cat. No. 10215, U. S. N. M. Igloolik Eskimo, 1871. Collected by Capt. C. F. Hall.

Fig. 3. WOMAN'S KNIFE (ULU). Blade crescent-shaped, fastened in the stem of the handle of antler by an iron rivet. The grip of the handle resembles closely the shape of the blade. Width of blade, 2½ inches.

Cat. No. 90259, U. S. N. M. Eskimo of Ungava, Canada, 1884. Collected by Lucien M. Turner.



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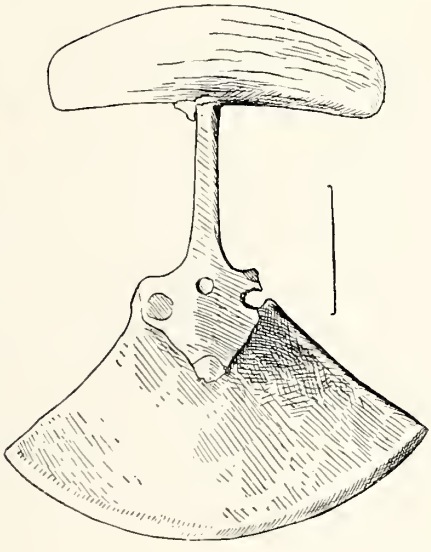

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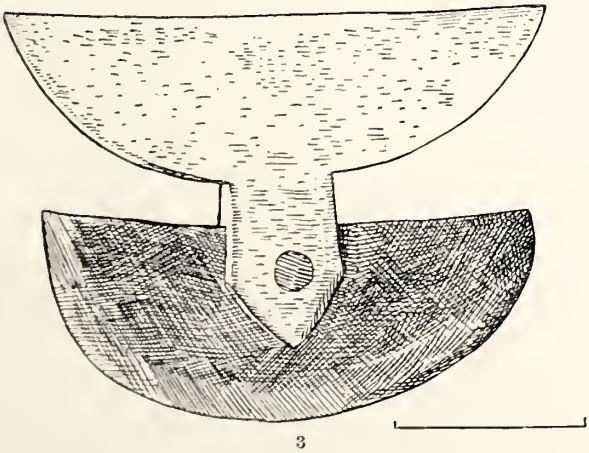

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ULUS, OR WOMAN'S KNIVES, FROM NORTHEAST CANADA.

EXPLANATION OF PLATE LVI.

ULUS, OR WOMAN'S KNIVES, FROM MACKENZIE DISTRICT.

Fig. 1. WOMAN'S KNIFE (ULU). Blade of iron, bell-shaped, the upper margin riveted to two stems of antler, the latter passing through mortises in the handle or grip. The specimen copies very closely the modern chopper knife. Width of blade, 4½ inches.

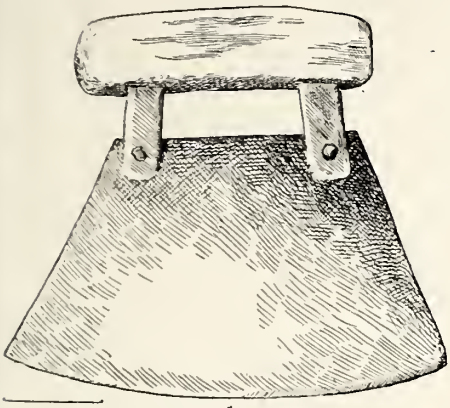
Cat. No. 2272, U. S. N. M. Eskimo of Anderson River, N. W. Canada. Gift of R. McFarlane.

Fig. 2. WOMAN'S KNIFE (ULU). Blade of iron, trapezoidal, fastened by means of two copper rivets into a handle of walrus ivory. The handle is pierced by a double row of holes on its upper margin for a lacing of whalebone. Width of blade, 5⅛ inches.

Cat. No. 7419, U. S. N. M. Eskimo of Fort Anderson. Gift of R. McFarlane.

Fig. 3. WOMAN'S KNIFE (ULU). Blade of sheet iron, inserted without rivets into a slit in the handle of walrus ivory. The latter is excavated on both sides to fit the hand, and ornamented with whalebone placed through perforations in the upper border with slight variations. Nos. 5813 and 7419 are of similar style. Width of blade, 5 inches.

Cat. No. 1630, U. S. N. M. Eskimo of Fort Anderson, N. W. Canada, 1864. Gift of R. McFarlane.



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ULUS, OR WOMAN'S KNIVES, FROM MACKENZIE DISTRICT.

EXPLANATION OF PLATE LVII.

ULUS, OR WOMAN'S KNIVES, FROM NORTHERN ALASKA.

Fig. 1. WOMAN'S KNIFE (ULU). Blade of iron, trapezoidal in shape, inserted in a groove in a handle of walrus ivory, the upper borders of which are perforated and adorned with lacing of whalebone. A double cone perforation serves for suspension strings. Width of blade, 3 inches.

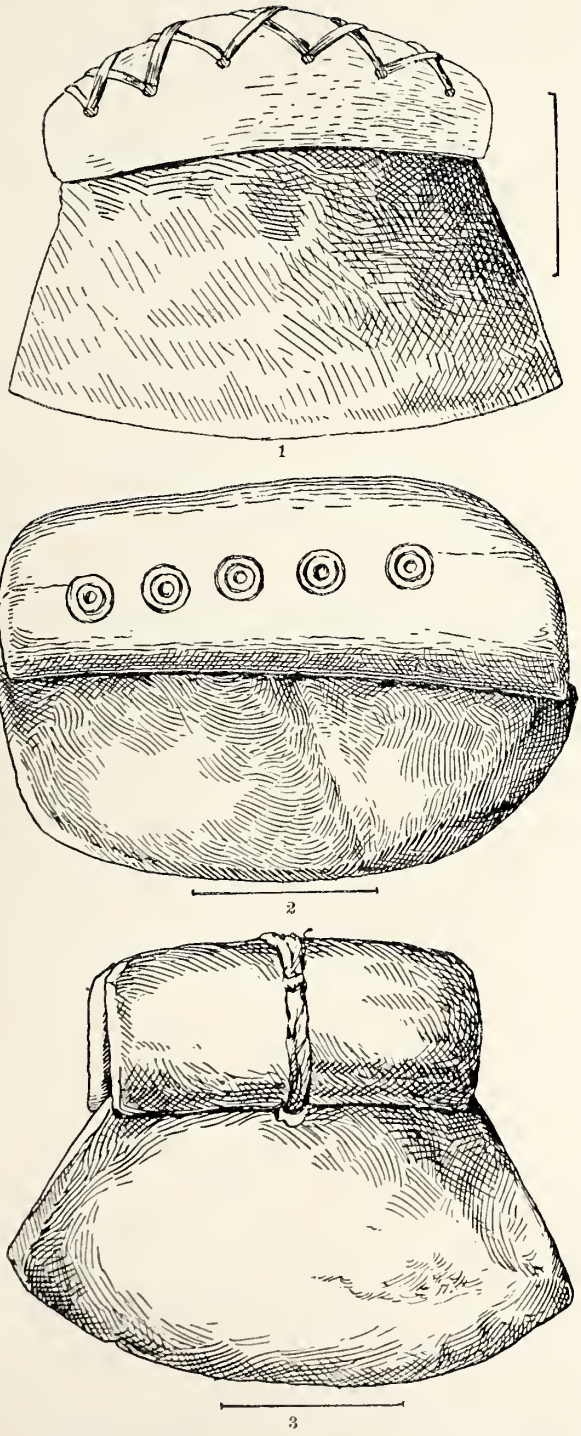
Cat. No. 5813, U. S. N. M. Eskimo of the mouth of Mackenzie River. Gift of R. McFarlane.

Fig. 2. WOMAN'S KNIFE (ULU). Blade of drab slate, set in groove of walrus ivory handle. There are five ornaments on each side of the latter, made each of a dot and two concentric rings. Width of blade, 3 inches.

Cat. No. 89687, U. S. N. M. Eskimo of Point Barrow, Alaska, 1884. Collected by Capt. P. H. Ray, U. S. A.

Fig. 3. WOMAN'S KNIFE (ULU). Blade of drab slate, in a handle of antler. The handle consists of two separate pieces lashed together and held to the blade by the sinew passing through the hole in the upper margin. Width of blade, 3 inches.

Cat. No. 89688, U. S. N. M. Eskimo of Point Barrow, Alaska, 1884. Collected by Capt. P. H. Ray, U. S. A.



ULUS, OR WOMAN'S KNIVES, FROM NORTHERN ALASKA.

EXPLANATION OF PLATE LVIII.

ULUS, OR WOMAN'S KNIVES, FROM NORTHERN ALASKA.

Fig. 1. WOMAN'S KNIFE (ULU). Blade of hornstone, leaf-shaped in outline excepting that upon one margin an angular projection extends upward for a tang driven into the end of a bit of antler which serves for a grip. Contrary to the usual method, the tang is driven into the grain of the antler at the end. Width of blade, 3 inches.

Cat. No. 89690, U. S. N. M. Eskimo of Point Barrow, Alaska, 1884. Collected by Capt. P. H. Ray, U. S. A.

Fig. 2. WOMAN'S KNIFE (ULU). Blade of drab slate, irregularly triangular, driven into a groove of a bit of antler. The mending of the handle by means of sinew lashing is noteworthy. Width of blade, 3 inches.

Cat. No. 89689, U. S. N. M. Eskimo of Point Barrow, Alaska, 1884. Collected by Capt. P. H. Ray, U. S. A.

Fig. 3. WOMAN'S KNIFE (ULU). Blade of slate, an irregular triangle inserted into a cut in a handle of bone, which is carved into the shape of a fish's tail, heterocercal. Length, $5\frac{1}{4}$ inches.

Cat. No. 89677, U. S. N. M. Eskimo of Point Barrow, Alaska, 1884. Collected by Capt. P. H. Ray, U. S. A.

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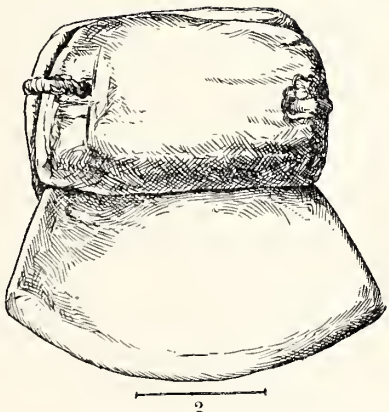

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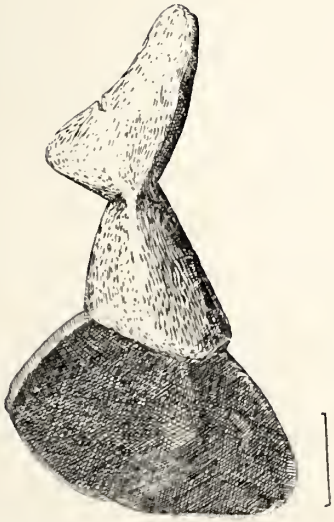

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ULUS, OR WOMAN'S KNIVES, FROM NORTHERN ALASKA.

EXPLANATION OF PLATE LIX.

ULUS OR WOMAN'S KNIVES, FROM NORTHERN ALASKA.

Fig. 1. WOMAN'S KNIFE (ULU). Blade of slate, somewhat cleaver-shaped and pointed. The tang at the end of the blade is a parallelogram inserted in a deep cut in the handle of whale rib. A lashing of rawhide holds the blade in place, which also has a packing of skin. Length, 9 inches.

Cat. No. 89594, U. S. N. M. Eskimo of Point Barrow, Alaska, 1884. Collected by Capt. P. H. Ray, U.S. A.

FIG. 2. WOMAN'S KNIFE (ULU). Blade of slate, set in a groove of a handle of bone, one side split off, to which the handle is fastened by a lashing of rawhide passing through a perforation in each. A larger hole receives a string for suspension. Length of handle, $4\frac{3}{4}$ inches.

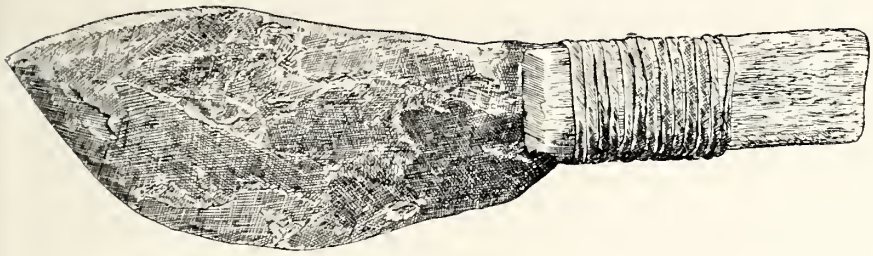
Cat. No. 89684, U. S. N. M. Eskimo of Point Barrow, Alaska, 1884.

Fig. 3. WOMAN'S KNIFE (ULU). Blade of pectolite, long and slender, showing on the straight back the double saw-cut by which the material was separated. Handle wanting. Length, $7\frac{1}{4}$ inches.

Cat. No. 56660, U. S. N. M. Eskimo of Point Barrow, Alaska, 1884. Collected by Capt. P. H. Ray, U. S. A.

Fig. 4. WOMAN'S KNIFE (ULU). Blade of pectolite, the special form of jades in this region. Handle wanting. Length, $4\frac{3}{8}$ inches.

Cat. No. 89675, U. S. N. M. Eskimo of Point Barrow, Alaska, 1884. Collected by Capt. P. H. Ray, U. S. A.



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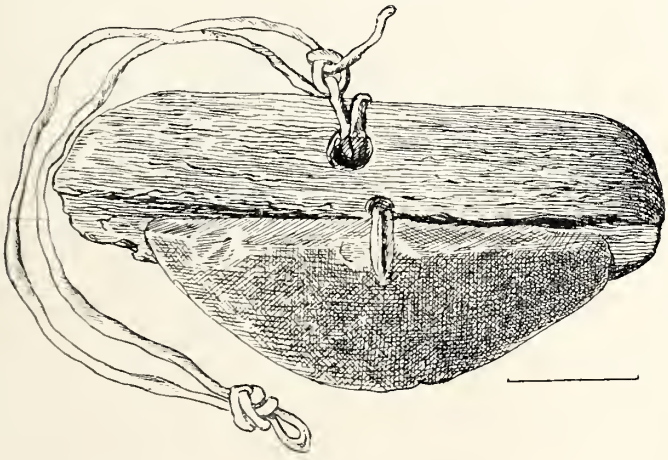

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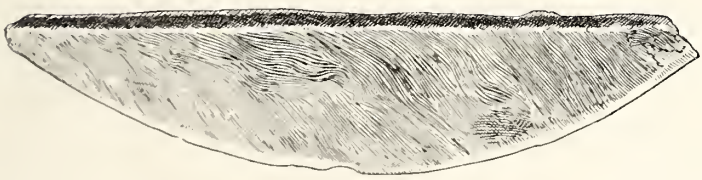

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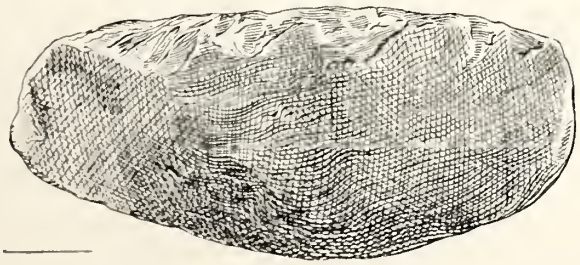

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ULUS, OR WOMAN'S KNIVES, FROM NORTHERN ALASKA.

EXPLANATION OF PLATE LX.

ULUS, OR WOMAN'S KNIVES, FROM KOTZEBUE SOUND.

Fig. 1. WOMAN'S KNIFE (ULU). Blade of iron, quadrant-shaped, inserted firmly into a short handle or grip of musk-ox horn. Width of blade, $5\frac{7}{8}$ inches.

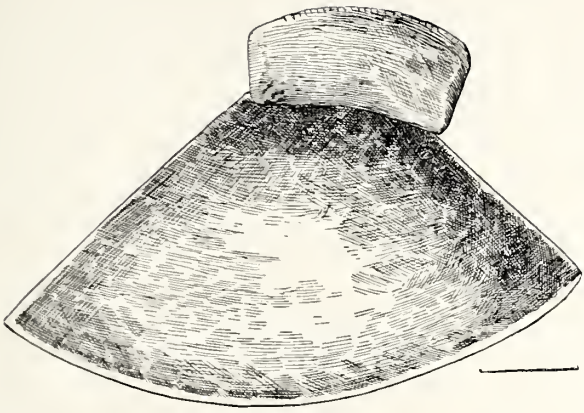
Cat. No. 75496, U. S. N. M. Eskimo of Kotzebue Sound, 1884. Collected by Lieut. G. M. Stoney, U. S. N.

Fig. 2. WOMAN'S KNIFE (ULU). Blade of hornstone, fan-shaped. Handle wanting. Width, $3\frac{1}{2}$ inches.

Cat. No. 75497, U. S. N. M. Eskimo of Kotzebue Sound, 1884. Collected by Lieut. G. M. Stoney, U. S. N.

Fig. 3. WOMAN'S KNIFE (ULU). Blade of jadeite, thin and highly polished, set in a pine handle, which is altogether modern. Length, $6\frac{1}{4}$ inches.

Cat. No. 76676, U. S. N. M. Eskimo of Cape Lisburne, Alaska. Collected by H. D. Woolfe.



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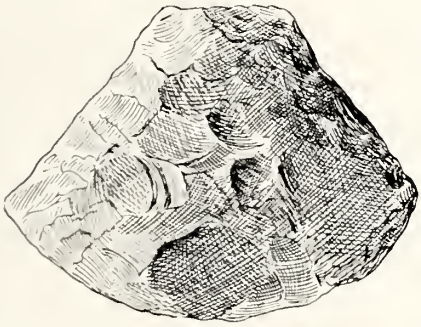

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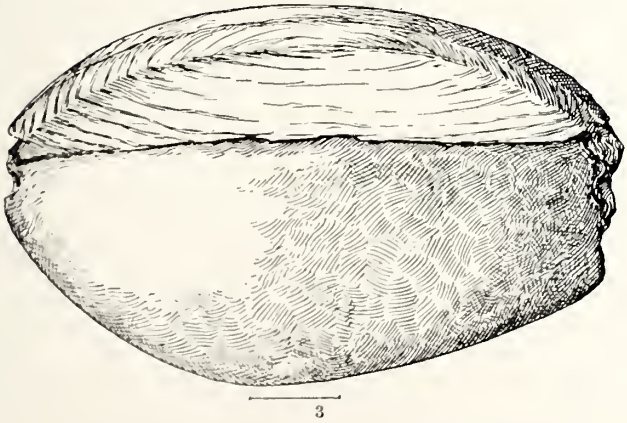

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ULUS, OR WOMAN'S KNIVES, FROM KOTZEBUE SOUND.

EXPLANATION OF PLATE LXI.

ULUS, OR WOMAN'S KNIVES, FROM HOTHAM INLET AND CAPE NOME.

Fig. 1. WOMAN'S KNIFE (ULU). Blade of hornstone, leaf-shaped, with a projection from one margin. The handle is of the most primitive character, being formed of osier, wrapped backward and forward longitudinally and held firmly in place by cross twining and weaving of the same material. The interstices are filled with fish scales. Length, 3¾ inches.

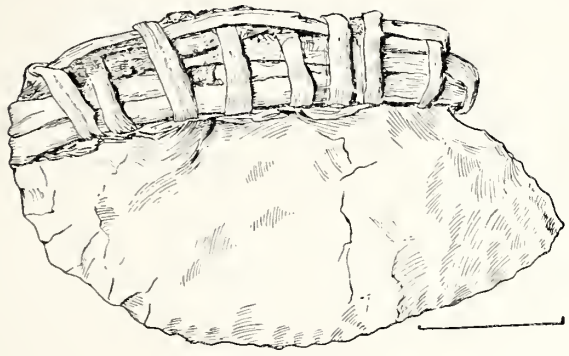
Cat. No. 63765, U. S. N. M. Eskimo of Hotham Inlet, Alaska. Collected by Lieut. G. M. Stoney, U. S. N.

Fig. 2. WOMAN'S KNIFE (ULU). Blade of chert or flint material, inserted in a handle of wood. On the upper margin of the latter at either corner are three cross gashes or grooves.

Cat. No. 63766, U. S. N. M. Eskimo of Hotham Inlet, Alaska. Collected by Lieut. G. M. Stoney, U. S. N.

Fig. 3. WOMAN'S KNIFE (ULU). Handle of walrus ivory abruptly wedge-shaped, like the kernel of a Brazil nut. Ornament, groove, and herring bone on top, lines and alternating tooth-shaped cuts on the side, with five scratches resembling inverted trees. Pocket groove for blade. Length, 2½ inches.

Cat. No. 44598, U. S. N. M. Eskimo of Cape Nome, Alaska, 1880. Collected by E. W. Nelson.



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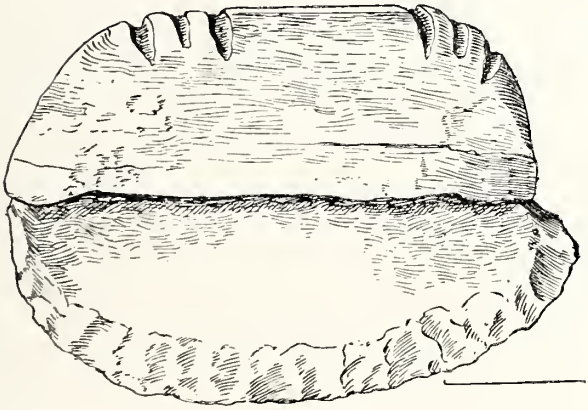

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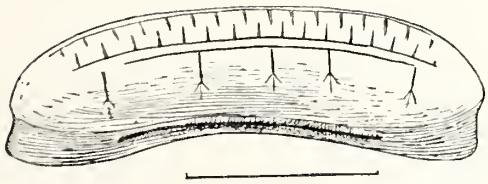

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ULUS, OR WOMAN'S KNIVES, FROM HOTHAM INLET AND CAPE NOME.

EXPLANATION OF PLATE LXII.

ULUS, OR WOMAN'S KNIVES, FROM PLOVER BAY, ST. LAWRENCE ISLAND, AND NORTON SOUND.

Fig. 1. WOMAN'S KNIFE (ULU). Blade of iron, rectangular, inserted into a pocket groove in the handle of antler, much weathered Almost identical with specimen from St. Lawrence Island. Length of handle, 8 inches.

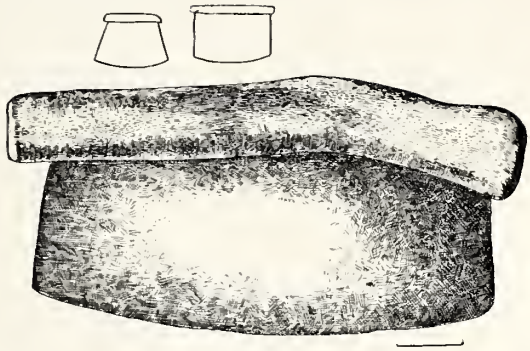
Cat. No. 46256, U. S. N. M. Eskimo of Plover Bay, Eastern Siberia. Collected by W. H. Dall.

Fig. 2. WOMAN'S KNIFE (ULU). Blade of iron, evidently not designed for the handle, set in a pocket groove twice too long for it. Handle of walrus ivory, wedge-shaped, wider in the middle. Length of handle, $4\frac{1}{2}$ inches.

Cat. No. 127008, U. S. N. M. Eskimo of St. Lawrence Island, 1880. Collected by E. W. Nelson.

Fig. 3. WOMAN'S KNIFE (ULU). Blade of slate, very large, inserted in a small grooved piece of ivory and held in place by a packing of rawhide. Width of blade, 8 inches.

Cat. No. 24363, U. S. N. M. Malemut Eskimo of Norton Sound, Alaska. Collected by Lucien M. Turner.



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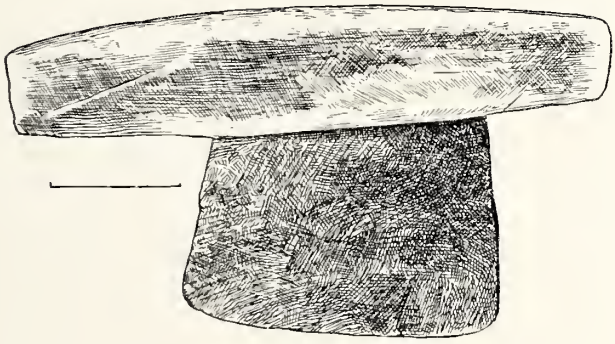

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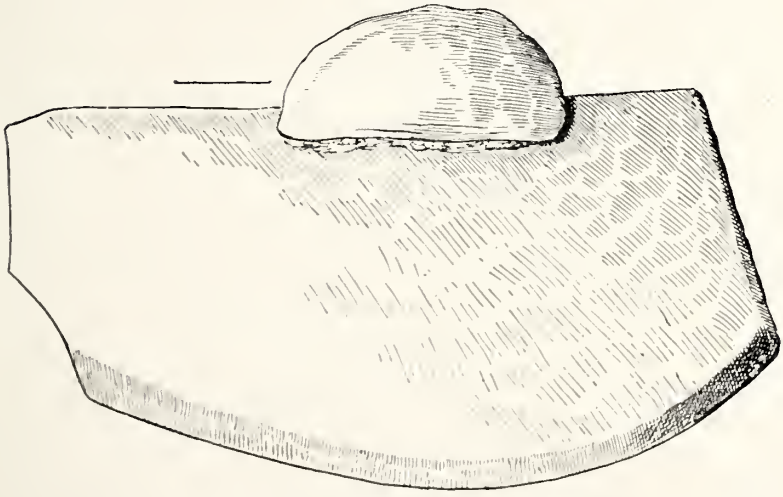

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ULUS, OR WOMAN'S KNIVES, FROM PLOVER BAY, ST. LAWRENCE ISLAND, AND NORTON SOUND.

EXPLANATION OF PLATE LXIII.

ULUS, OR WOMAN'S KNIVES, FROM NORTON SOUND

Fig. 1. WOMAN'S KNIFE (ULU). Blade of iron, a truncated circular segment inserted in a groove in a handle of walrus ivory. The ornament around the border by alternation of points gives a funiculate effect. The hatching is poorly done. Blade $3\frac{3}{8}$ inches.

Cat. No. 33745, U. S. N. M. Unaligmut Eskimo of St. Michaels, Alaska. Collected by E. W. Nelson.

Fig. 2. WOMAN'S KNIFE (ULU). Blade of dark slate, set in groove of wooden handle, the latter perforated for suspension. This specimen has never been used. Length of blade, $5\frac{1}{2}$ inches.

Cat. No. 43432, U. S. N. M. Unaligmut Eskimo, St. Michaels, Alaska. Collected by E. W. Nelson.

Fig. 3. WOMAN'S KNIFE (ULU). Blade of slate, unsymmetrically bell-shaped, inserted in a grooved handle of soft wood. Width of blade, $3\frac{1}{4}$ inches.

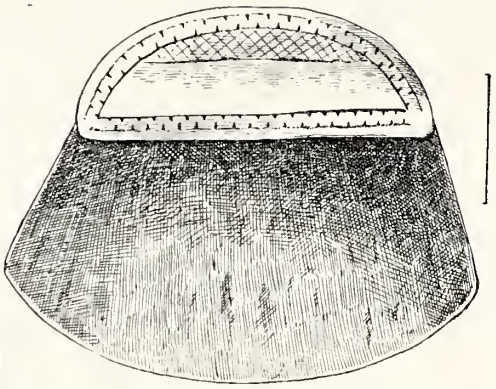
Cat. No. 33744, U. S. N. M. Unaligmut Eskimo of St. Michaels, Alaska. Collected by E. W. Nelson.

Fig. 4. WOMAN'S KNIFE (ULU). Blade of iron, inserted in a groove of the walrus ivory handle. The latter is beautifully colored by use and cut out in graceful curves, so as to combine perfectly lightness and strength. Width of blade, $3\frac{1}{4}$ inches.

Cat. No. 24366, U. S. N. M. Unaligmut Eskimo of St. Michaels, Alaska, 1878. Collected by Lucien M. Turner.

Fig. 5. WOMAN'S KNIFE (ULU). Blade of iron, usual form, inserted into the groove of the handle of walrus ivory. The handle is in shape of an orange segment. A diminutive specimen. Blade $2\frac{1}{16}$ inches wide.

Cat. No. 43866, U. S. N. M. Unalakleet Eskimo, Norton Sound, Alaska. Collected by E. W. Nelson.



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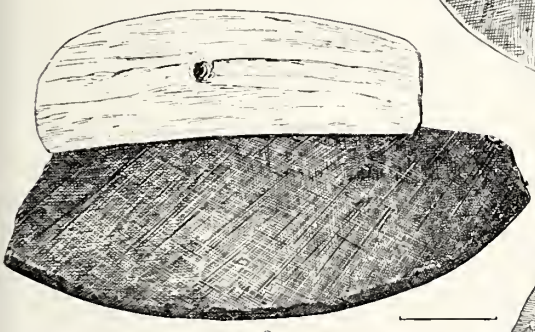

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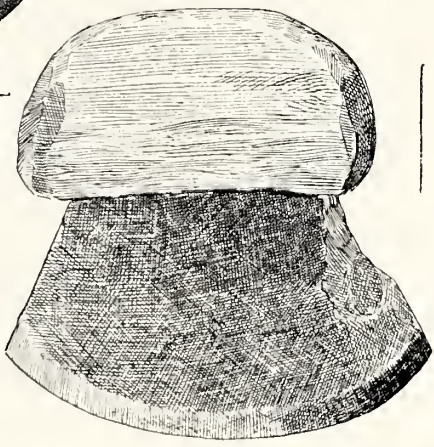

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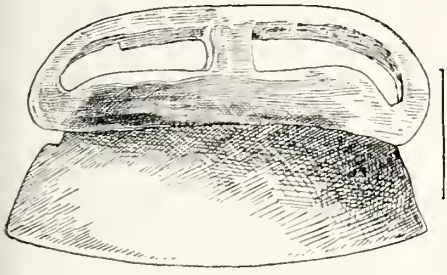

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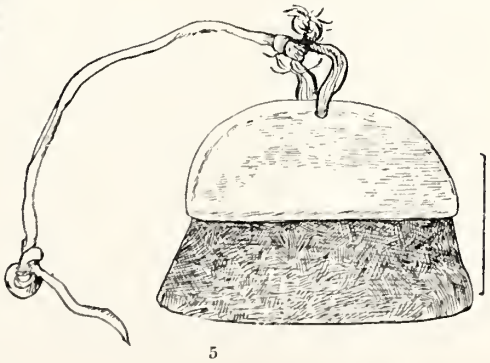

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ULUS, OR WOMAN'S KNIVES, FROM NORTON SOUND.

EXPLANATION OF PLATE LXIV.

ULUS OR WOMAN'S KNIVES, FROM NORTON SOUND AND LOWER YUKON.

Fig. 1. WOMAN'S KNIFE (ULU). Blade of black slate, typical in form, curved edge and straight back, inserted in the groove of a clumsy pine handle, and held in place by a lashing of spruce root passing through the handle and through a hole rubbed in the blade. Length of blade, 4½ inches.

Cat. No. 38255, U. S. N. M. Ekogmut Eskimo, Lower Yukon. Collected by E. W. Nelson.

Fig. 2. WOMAN'S KNIFE (ULU). Blade of drab slate, long, slender, and furnished with a lashing-hole, made not by boring but by the meeting of grooves sunk on the two sides. This sort of perforation is quite common in ulu blades of slate. Length, 8 inches.

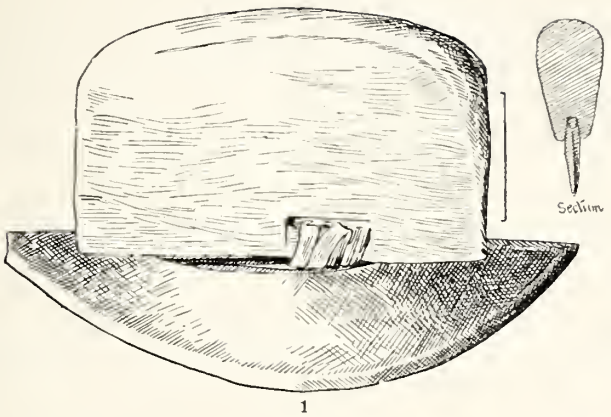
Cat. No. 48831, U. S. N. M. Ekogmut Eskimo, Lower Yukon, Alaska. Collected by E. W. Nelson.

Fig. 3. WOMAN'S KNIFE (ULU). Blade of dark slate, in form of circular segment. Its size indicates its use for cutting fish and meat rather than skins. Length, 10½ inches.

Cat. No. 33766, U. S. N. M. Malemut Eskimo of Norton Sound, Alaska. Collected by E. W. Nelson.

Fig. 4. WOMAN'S KNIFE (ULU). Called a meat-knife in Mr. Turner's catalogue. Blade of cleaver shape, riveted into a very deep groove in a handle of antler. The latter projects from the blade and has on its under side three deep finger grooves. Pierced for suspension. Length of knife, 8 inches.

Cat. No. 24365, U. S. N. M. Unaligmut Eskimo, south of Norton Sound, Alaska.



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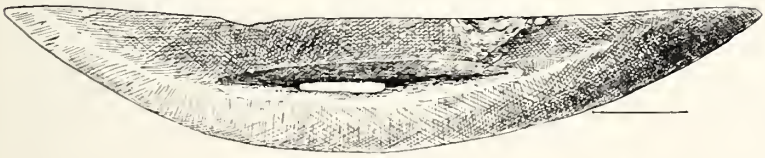

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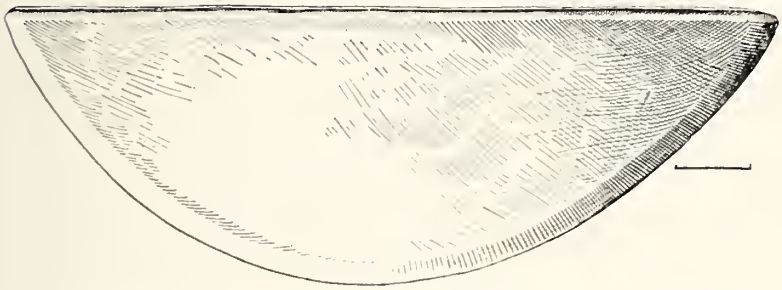

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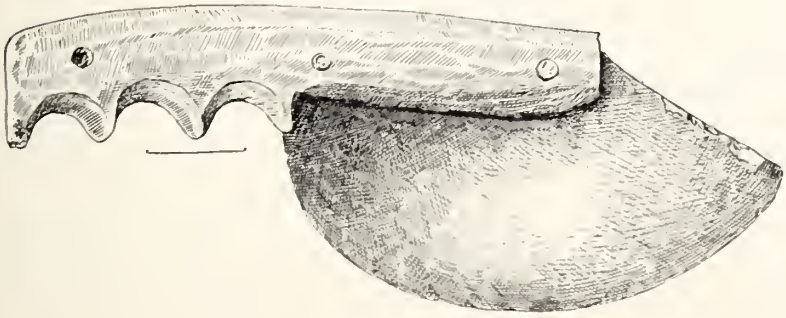

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ULUS, OR WOMAN'S KNIVES. FROM NORTON SOUND AND LOWER YUKON.

EXPLANATION OF PLATE LXV.

ULUS OR WOMAN'S KNIVES, FROM NORTON SOUND AND VICINITY.

Fig. 1. WOMAN'S KNIFE (ULU). Blade of dark slate, shaped like a worn butcher's knife, and having a tang an inch long. Figured to show one mode of attachment. Length, 5 inches.

Cat. No. 48823, U. S. N. M. Ekogmut Eskimo, Lower Yukon, Alaska. Collected by E. W. Nelson.

Fig. 2. WOMAN'S KNIFE (ULU). Handle of antler with groove cut quite through the outer and the spongy portion. Blade missing. Length, 4 inches.

Cat. No. 45489, U. S. N. M. Unaligmut Eskimo, St. Michaels, Alaska. Collected by E. W. Nelson.

Fig 3. WOMAN'S KNIFE (ULU). Handle of walrus ivory, exhibiting the finest finish and the greatest economy of material. The lower portion is thickened just enough to hold the iron blade. The upper margin is expanded like the back of a razor. Doubtless the piece was made by an Eskimo, but the form and finish are quite beyond his rude tools before European contact. Length, 3 inches.

Cat. No. 48257, Eskimo of Nunivak Island, Alaska. Collected by E. W. Nelson.

Fig. 4. WOMAN'S KNIFE (ULU). Handle of walrus ivory, wedge-shaped, rounded above, cut out in a crescent-shaped opening, pocket groove for blade. Length, $2\frac{1}{8}$ inches.

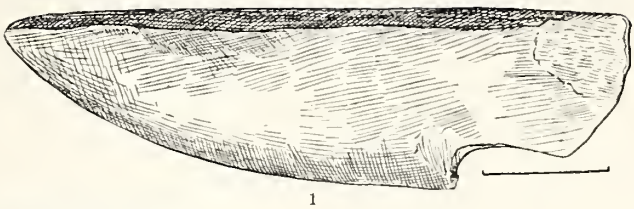
Cat. No. 43959, U. S. N. M. Eskimo north of Norton Sound, 1880. Collected by E. W. Nelson.

Fig. 5. WOMAN'S KNIFE (ULU). Handle of walrus ivory, plane surface on the bottom and sides and rounded on the back. A groove extends across the middle, and at its middle the handle is perforated for a suspension cord. Length, 3 inches.

Cat. No. 37744, U. S. N. M.

Fig. 6. WOMAN'S KNIFE (ULU). Handle of walrus ivory with broad stem, like Smith's Sound specimen, and grip with two wings notched at the ends. Length, $2\frac{7}{8}$ inches.

Cat. No. 44180, U. S. N. M. Eskimo of Cape Darby, Alaska, 1880. Collected by E. W. Nelson.



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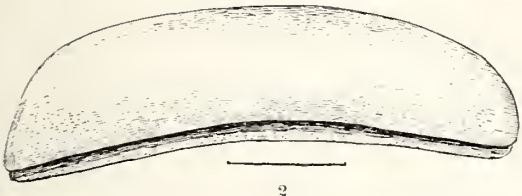

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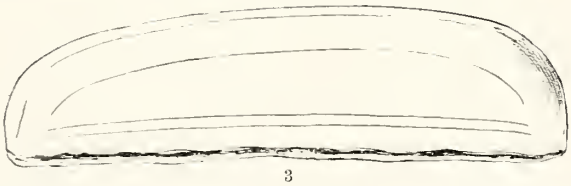

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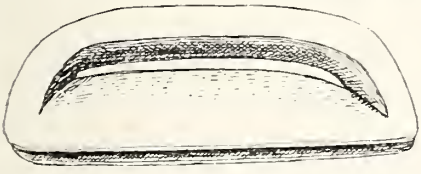

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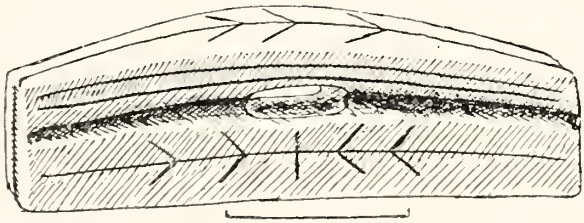

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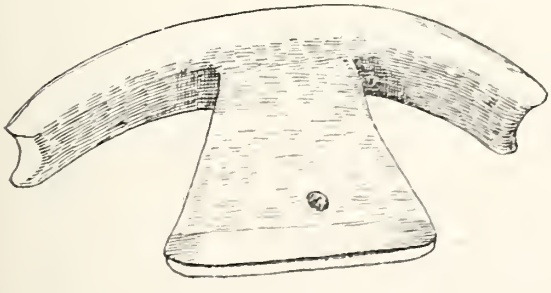


6

ULUS, OR WOMAN'S KNIVES, FROM NORTON SOUND AND VICINITY.

EXPLANATION OF PLATE LXVI.

ULUS, OR WOMAN'S KNIVES, FROM NORTON SOUND TO KUSKOKVIM RIVER.

Fig. 1. WOMAN'S KNIFE (ULU). Handle of walrus ivory, with slit for insertion of metal blade, without rivets. There is an opening to form the grip, and a projection at one end is in imitation of a seal's head. The ornamentation consists of scratches and a coarsely cut gutter. Blade wanting. Length, 3½ inches.

Cat. No. 38366, U. S. N. M. Nuloktologamut Eskimo, Alaska. Collected by E. W. Nelson.

Fig. 2. WOMAN'S KNIFE (ULU). Handle of walrus ivory, with slit for insertion of metal blade, without rivets. The grip is cleverly formed by the elongated body of marmot, the head projecting. Ornamentation, three bands scratched on the border and five dots. Blade wanting. Length 4¼ inches.

Cat. No. 38129, U. S. N. M. Nuloktologamut Eskimo, Alaska. Collected by E. W. Nelson.

Fig. 3. WOMAN'S KNIFE (ULU). Handle a delicate specimen of walrus ivory in form of a sledge, the groove for the metal blade in the curved portion. The grip separated from the blade piece by a long open space. At the end of the handle is the head of a seal devouring a miniature walrus. The dot and circle ornament is used. Length, 4¾ inches.

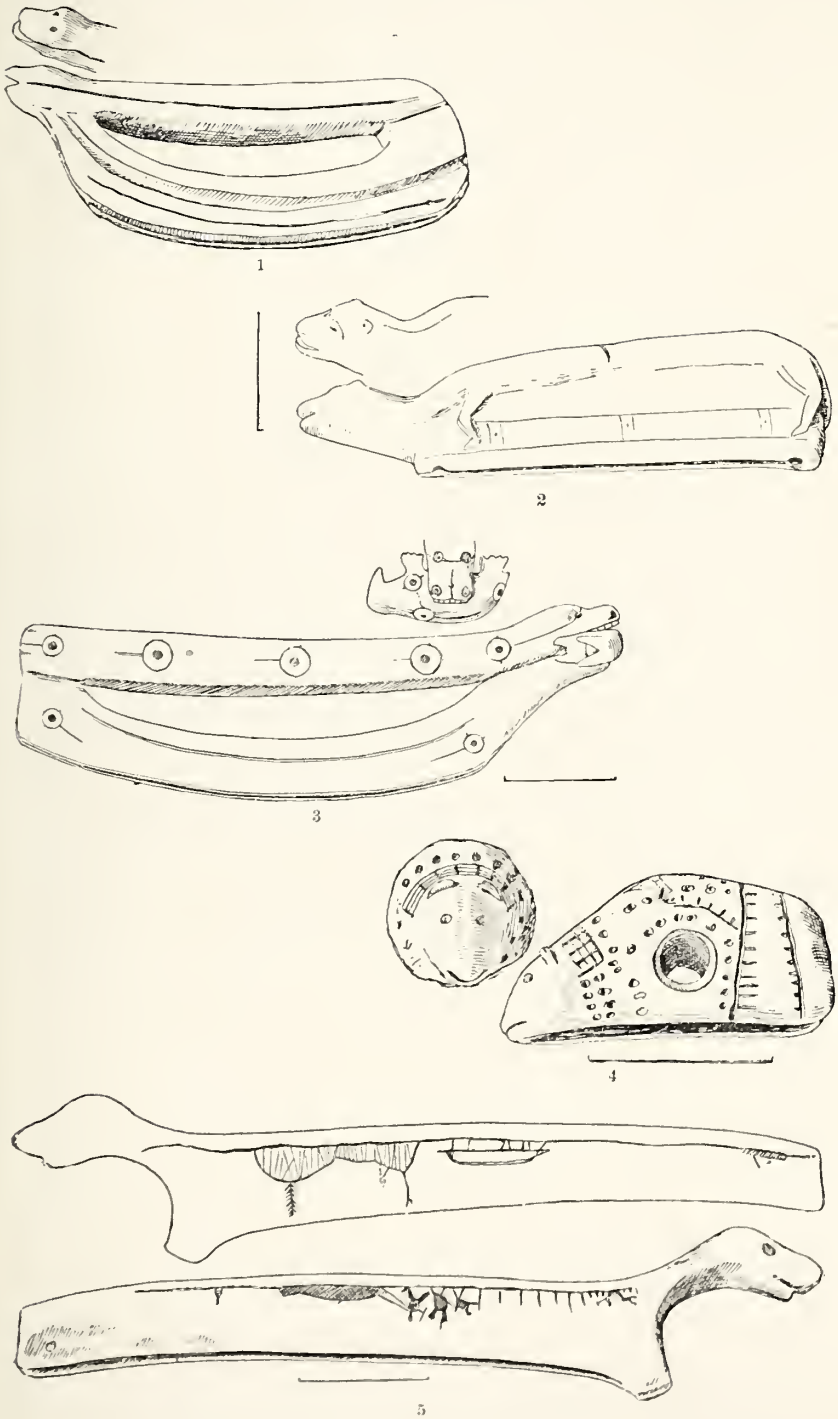
Cat. No. 37960, U. S. N. M. Magemut Eskimo of Kuskokvim Bay, Alaska Collected by E. W. Nelson.

Fig. 4. WOMAN'S KNIFE (ULU). Small handle of walrus ivory, fairly carved, and having a deep groove for a metal blade. On one end is the head of some animal, on the other a human face, and all over the surface dots and geometric patterns. Length, 1¾ inches.

Cat. No. 33628, Unaligmut Eskimo, St. Michaels, Alaska. Collected by E. W. Nelson.

Fig. 5. WOMAN'S KNIFE (ULU). Handle of antler, and unique in form. In addition to the usual groove for the blade, the handle is extended in one direction to form the head of an animal. Upon the sides are shown the igloo, or hut, of an Eskimo family, the scaffold, on which all things are put out of the way of the dogs, and a party of Eskimo. Length, 6 inches.

Cat. No. 24376, U. S. N. M. Eskimo of Norton Sound. Collected by Lucien M. Turner.



ULUS, OR WOMAN'S KNIVES, FROM NORTON SOUND TO KUSKOKVIM RIVER.

EXPLANATION OF PLATE LXVII.

ULUS, OR WOMAN'S KNIVES, FROM KUSKOKVIM DISTRICT.

Fig. 1. WOMAN'S KNIFE (ULU). Handle of walrus ivory, with slit for insertion of metal blade, without rivets. The outer margin is enlarged to form a secure grip. The ornamentation by concentric rings variegated with grooved lines has a pleasing effect. Blade wanting. Length of handle, $3\frac{1}{4}$ inches.

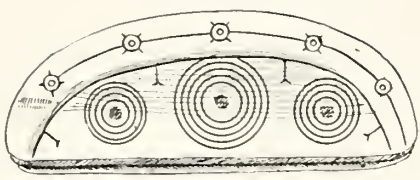
Cat. No. 37327, U. S. N. M. Agaiagamute Eskimo, Alaska. Collected by E. W. Nelson.

Fig. 2. WOMAN'S KNIFE (ULU). Blade of iron, set in the groove of a walrus ivory handle. With endless variety of detail this form of handle, with a crescent-shaped opening, is typical. Ornamentation, a groove above with cross lines in pairs and fours and cross hatching in the lower part. Width of blade, 3 inches.

Cat. No. 3 316, U. S. N. M. Kongiganagamute Eskimo, north shore of Kuskokvim Bay, 1879. Collected by E. W. Nelson.

Fig. 3. WOMAN'S KNIFE (ULU). Handle of walrus ivory, very gracefully carved and ornamented with thickened base for blade, a crescent-shaped razor-back on the upper margin, a very thin diaphragm between the base and upper border, which is cut away on its upper margin. The blade is of iron, and the whole piece is very beautiful. Length, $3\frac{1}{8}$ inches.

Cat. No. 130617, U. S. N. M. Eskimo of Kuskokvim River, Alaska. Collected by Cyrus Adler.



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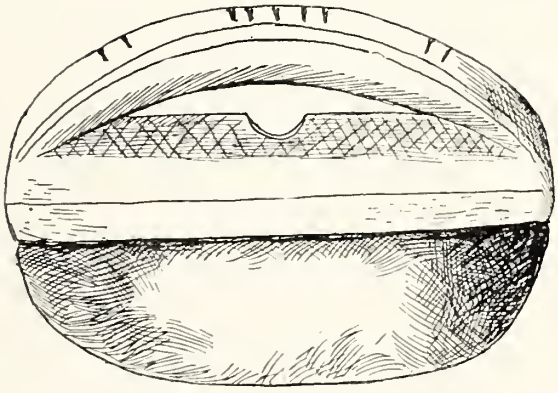

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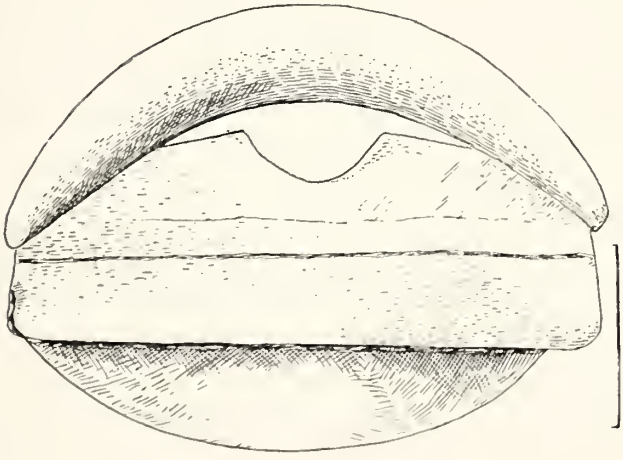

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ULUS, OR WOMAN S KNIVES, FROM KUSKOKVIM DISTRICT.

EXPLANATION OF PLATE LXVIII.

ULUS, OR WOMAN'S KNIVES, FROM BRISTOL BAY.

Fig. 1. WOMAN'S KNIFE (ULU). It is simply a blade or celt of slate, with a handle of wood pierced and fitted on the top so that the slate extends through and above. It is evident that we have here gotten below the walrus area and the region of stone with conchoidal fracture. It is also evident that we are away from the lines of Aboriginal and European travel and traffic. Length of handle, $2\frac{3}{4}$ inches.

Cat. No. 127389, U. S. N. M. Eskimo of Ugashik, Bristol Bay, Alaska. Collected by I. Applegate.

Fig. 2. WOMAN'S KNIFE (ULU). Handle of wood. Blade of slate, resembling a short jackknife, blade inserted into the end of the triangular handle and lashed with sinew. Length, 5 inches.

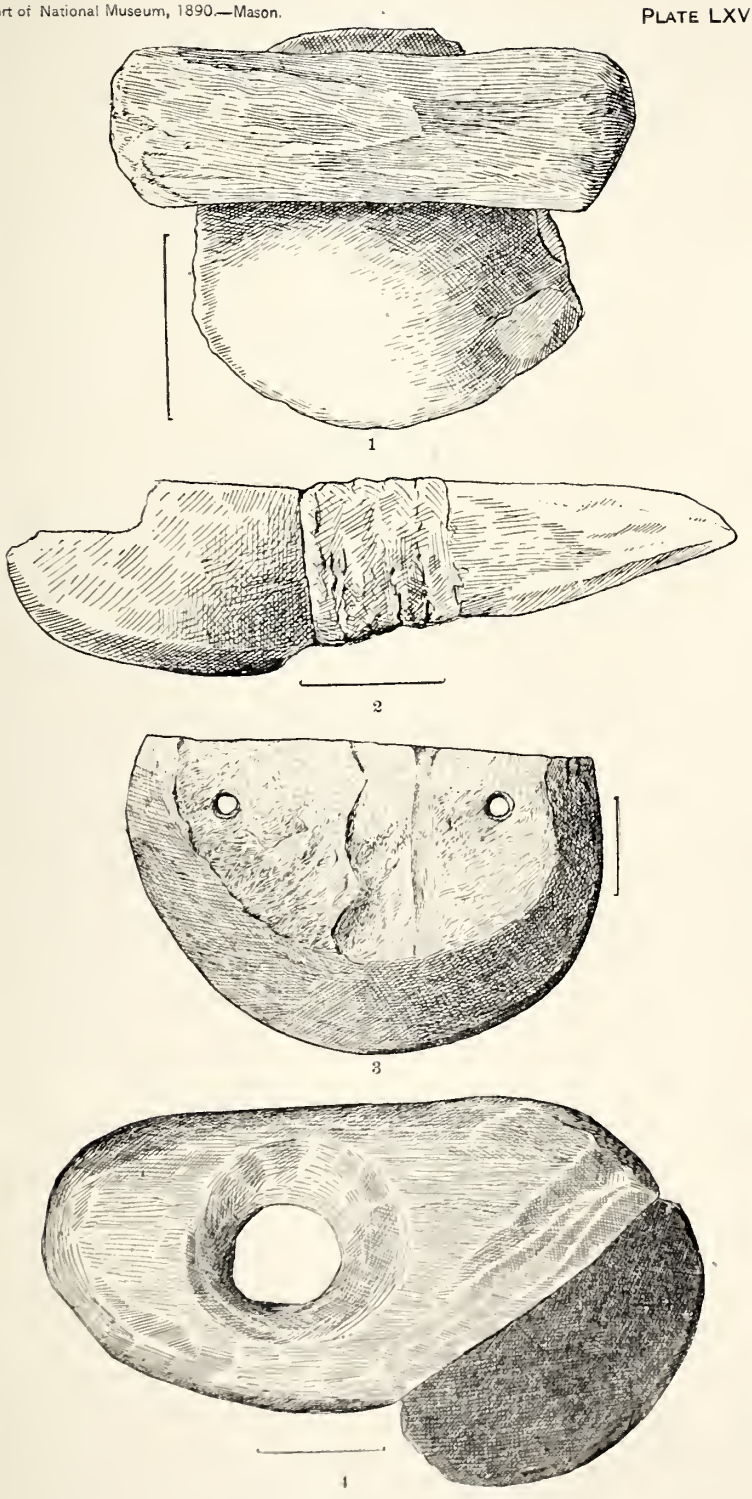
Cat. No. 127735, U. S. N. M. Ogulmut Eskimo of Ugashik, Alaskan Peninsula. Collected by W. J. Fisher.

Fig. 3. WOMAN'S KNIFE (ULU). Blade of greenish slate, semicircular, pierced twice near the upper margin for lashing or for rivets. Width, 5 inches.

Cat. No. 90409, U. S. N. M. Ogulmut Eskimo of Bristol Bay, Alaska. Collected by W. J. Fisher.

Fig. 4. WOMAN'S KNIFE (ULU). Blade of slate, leaf-shaped, inserted in the end of the odd-shaped wooden handle at an angle of 45°. The handle is perforated for the thumb and fingers, and for suspension. Length of handle, 5 inches.

Cat. No. 12738 , U. S. N. M. Eskimo of Togiak River. Collected by I. Applegate.



ULUS, OR WOMAN'S KNIVES, FROM BRISTOL BAY.

EXPLANATION OF PLATE LXIX.

ULUS, OR WOMAN'S KNIVES, FROM BRISTOL BAY.

Fig. 1. WOMAN'S KNIFE (ULU). Blade of iron, in shape of a sledge runner, inserted in a pocket groove of the ivory handle, which has the shape of the Egyptian symbol of the eye. Length, $3\frac{3}{4}$ inches.

Cat. No. 55918*a*, U. S. N. M. Eskimo of Bristol Bay, Alaska. Collected by C. L. McKay.

Fig. 2. WOMAN'S KNIFE (ULU). Blade of slate, inserted in a pocket groove of the wooden handle. The latter is shaped like the Egyptian symbol for the eye, the opening forming a convenient cavity for thumb and middle finger. Compare 55918. Length, $5\frac{1}{2}$ inches.

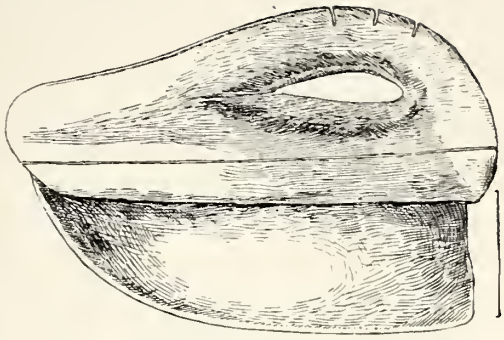
Cat. No. 55916*a*, U. S. N. M. Eskimo of Bristol Bay, Alaska. Collected by C. L. McKay.

Fig. 3. WOMAN'S KNIFE (ULU). Blade of iron, rounded at either end, inserted in a pocket groove of the ivory handle, which has a notched back and unsymmetrical opening for the thumb and fingers. Length, $4\frac{1}{2}$ inches.

Cat. No. 55918, U. S. N. M. Eskimo of Bristol Bay, Alaska. Collected by C. L. McKay.

Fig. 4. WOMAN'S KNIFE (ULU). Blade and handle of one piece of iron, the former in shape of a butcher's knife, the latter is curled over the blade in a sigmoid curve and slightly welded to the back. Evidently not of native make. Length, $6\frac{1}{2}$ inches.

Cat. No. 55918*b*, U. S. N. M. Eskimo of Bristol Bay, Alaska. Collected by C. L. McKay.



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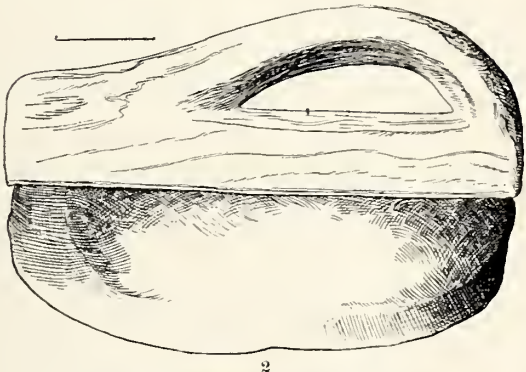

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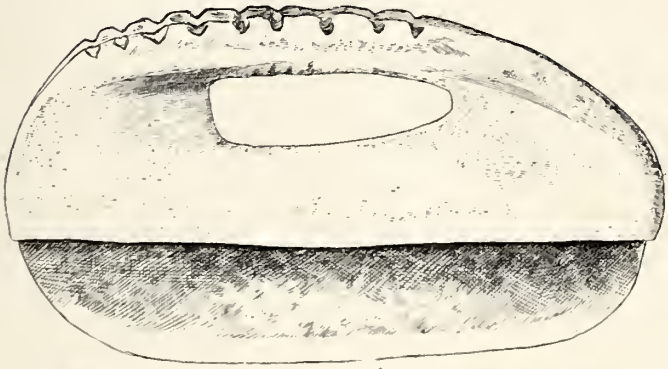

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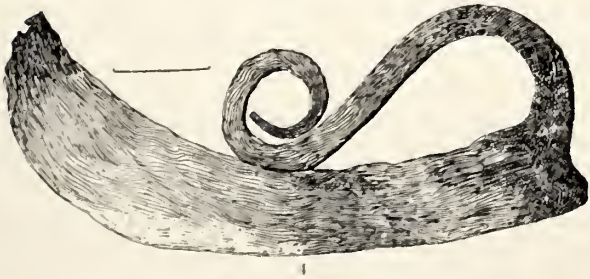


4

ULUS, OR WOMAN'S KNIVES, FROM BRISTOL BAY.

EXPLANATION OF PLATE LXX.

ULUS, OR WOMAN'S KNIVES, FROM BRISTOL BAY, ALASKAN PENINSULA, AND KADIAK.

Fig. 1. WOMAN'S KNIFE (ULU). Blade of fine black slate, set in a deep pocket groove of the wooden handle. Space cut out on both sides of the handle for thumb and middle finger. Length, 3½ inches.

Cat. No. 55916*b*, U. S. N. M. Eskimo of Bristol Bay, Alaska. Collected by C. L. McKay.

Fig. 2. WOMAN'S KNIFE (ULU). Blade of slate, set in a pocket groove in a handle of cedar wood, and held in place by a seizing of wood. A very old and much used specimen. Length, 7¾ inches,

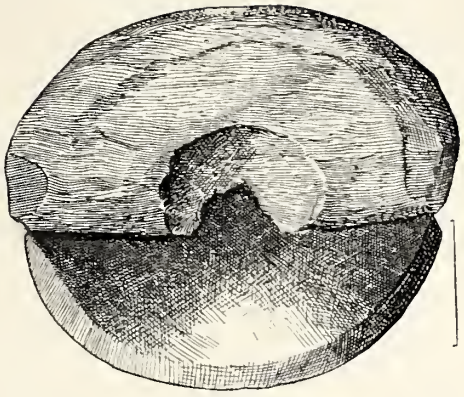
Cat. No. 90410, U. S. N. M. Eskimo of Kadiak Island, Alaska. Collected by W. J. Fisher.

Fig. 3. WOMAN'S KNIFE (ULU). Blade of slate, shaped like a sledge runner, lashed to a handle of wood, which is much too short, by a splint of root passing through the blade and over the handle. Width of blade, 6¾ inches.

Cat. No. 90412, U. S. N. M. Eskimo of Kadiak Island, Alaska. Collected by W. J. Fisher.

Fig. 4. WOMAN'S KNIFE (ULU). Blade of slate, set in a pocket groove of the handle, made by splitting the latter, excavating the groove and then lashing the two parts together and to the blade by sinew passing through the blade and through the handle and sunk in a groove of the handle on either side. The handle has spindle-shaped ends. Length, 9½ inches.

Cat. No. 72541, U. S. N. M. Eskimo of the Alaskan Peninsula. Collected by W. J. Fisher.



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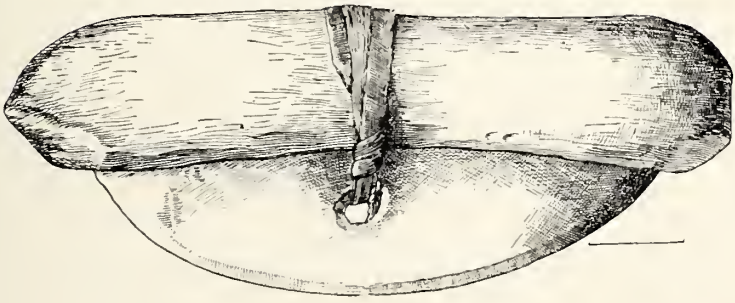

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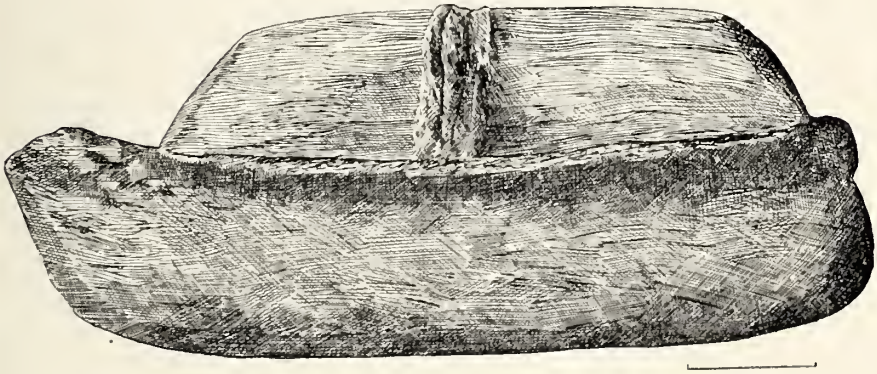

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4

ULUS, OR WOMAN'S KNIVES, FROM BRISTOL BAY, ALASKAN PENINSULA, AND KADIAK.

EXPLANATION OF PLATE LXXI.

ULUS, OR WOMAN'S KNIVES, FROM KADIAK AND SOUTHWARD.

Fig. 1. WOMAN'S KNIFE (ULŪ). Large blade of slate inserted in a groove of the cylindrical handle of wood, and held in place by a lashing of braided sinew, which for some unknown reason is stretched beneath the handle from one lashing to the other. Length of blade, $5\frac{5}{8}$ inches.

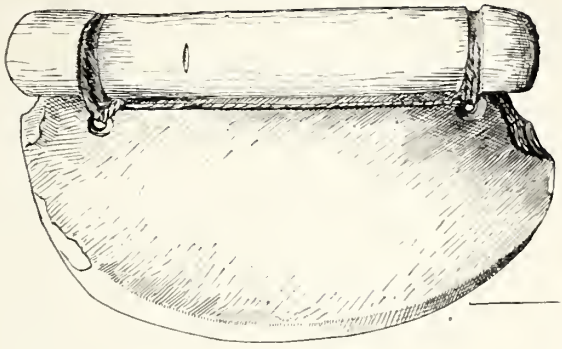
Cat. No. 72540, U. S. N. M. Eskimo, Kadiak. Collected by W. J. Fisher.

Fig. 2. WOMAN'S KNIFE (ULU). Blade of iron, crescent-shape, and handle of wood, the whole closely imitating those in use among civilized people for meat choppers. Length of handle, $6\frac{1}{4}$ inches.

Cat. No. 74362, U. S. N. M. Tlingit Indians, Sitka, Alaska. Collected by T. T. McLean.

Fig. 3. WOMAN'S KNIFE (ULU). Blade of slate. Handle wanting. Upon the upper margin of the blade is a tang $1\frac{5}{8}$ inches wide to render it firm in its handle. Width of blade, $6\frac{1}{4}$ inches.

Cat. No. 127726, U. S. N. M. Tlingit Indians of Fort Wrangle, Alaska. Collected by W. J. Fisher.



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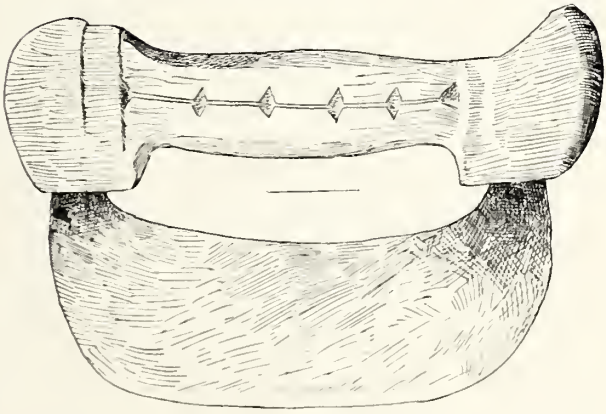

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ULUS, OR WOMAN'S KNIVES, FROM KADIAK AND SOUTHWARD.